

DPC Economic Sustainability Plan Review Panel Initial Findings

Presented by Dr. Robert Gilbert,
Panel Chair

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Strengths

1. Describes clearly the intrinsic value of the Delta and its economy and documents the many public-good services provided by the Delta
2. Provides valuable baseline information about the Delta economy
3. Gives a starting point in combination with other recent studies to conduct a comprehensive, cost-benefit analysis of alternatives for improving water supply reliability and enhancing the ecosystem
4. Offers creative ideas for strengthening the Delta economy
5. Substantiates importance of lowland levees for protecting people, property and the environment
6. Provides a potentially viable alternative to improve reliability of lowland levees

Weaknesses

1. Is not and should not be used for cost-benefit analysis of alternatives for improving water supply reliability and enhancing the ecosystem
2. Does not explicitly provide information to prioritize how future resources are invested in the Delta
3. Does not offer a clear or viable definition of economic sustainability
4. Provides an optimistic and misleading estimate for the cost of upgrading lowland levees
5. Does not address need for evacuation planning to protect public safety

Recommendations to Council

1. Develop strategies to implement a user-fee system to address the public-goods nature of the Delta
2. Conduct a comprehensive and credible cost-benefit analysis to analyze alternatives for improving water supply reliability and enhancing ecosystem services
3. Regional, state and federal agencies work with the public to develop standards for levees in the Delta
4. Include costs for mitigating economic as well as environmental impacts to the Delta in analyzing water export alternatives
5. State agencies work with local stakeholders to develop a prioritization plan for investing future resources in the Delta
6. Take immediate steps to improve maintenance and monitoring for existing levees and evacuation and emergency flood response

Responses to Questions

1. Are purpose and scope well defined and is the analysis of economic sustainability objective?
 - Yes, the purpose and scope are well defined
 - The assessment of baseline economic conditions is objective
 - The interpretation of the assessment overreaches since it is an impact analysis, not a benefit-cost analysis, and since the study area is confined to the Delta

Responses to Questions

2. Is the Plan internally consistent and scientifically defensible?

- Yes, the baseline assessment of economic impacts within the Delta is consistent and defensible
- The estimated costs for improving the levees are not defensible because (1) the standards have not yet been established by all of the stakeholders and (2) the estimates have not necessarily included all costs involved

Responses to Questions

3. Are analyses and results well-presented and clear?
 - Economic analyses are well-drafted and use appropriate techniques
 - Report provides needed information on economy, culture and other unique characteristics of the Delta
 - Study collectively documents the Delta's contributions to the region and state

Responses to Questions

4. Is the best available science and information used and are gaps for future research identified?
- Yes, the best available science and information has been used for the baseline economic analysis and some gaps have been identified
 - Sustainability is not defined clearly and metrics are not established
 - It is an impact study, not a benefit-cost analysis, and is therefore not appropriate for resource-allocation decisions
 - A comprehensive and credible benefit-cost analysis is needed in order to make rational resource-allocation decisions

Responses to Questions

5. How well does the Plan integrate spatial and temporal scales?

- The Plan integrates spatial scales within the legal definition of the Delta by distinguishing the Primary and Secondary Zones within the economic analysis
- The long-run forecasting process is not well defined and therefore it is difficult to assess its adequacy
- Proposed “fat levee” does attempt to address spatial variability, but more detailed and comprehensive data and analyses would be necessary to adequately estimate costs

Responses to Questions

6. How well does the Plan address uncertainty?

- Uncertainty, as measured in probabilistic terms, is not incorporated in the economic analysis
- No attempt is made to convey the uncertainty in the economic results and forecasts
- Uncertainty in future flood levels is addressed in the proposed “fat levee” by providing a robust cross-section that can readily be raised, however it is not captured in the economic analysis for the cost of implementing this concept

Responses to Questions

7. Is the identification of key economic sectors and analysis of the baseline and trends adequate?
- Yes, this study presents the best available data and uses them appropriately in developing the baseline and historic trends
 - This study documents that the main economic driver is agriculture, and it establishes the relative contributions of recreation and infrastructure

Responses to Questions

8. Is the baseline estimate of agricultural production accurate and reliable?
- Yes – adapting IMPLAN model with local production characteristics is sound
 - This aspect of the report is well written, incorporated input from the local stakeholders, and is one of the most valuable contributions of this work

Responses to Questions

9. Is the approach for estimating impacts of water policy proposals on crop choice and production sound?
 - Yes, the multinomial logit model used here is a state-of-the-art approach and we commend the authors for adopting it given the short time frame of the study

Responses to Questions

10. Is the interpretation of results from the crop-choice model reasonable and appropriate?

- No because there is not enough information provided to assess the model
- Historic salinity levels used in the analysis may not be appropriate for forecasting since future salinity impacts are outside the range of the available data
- Adequate description of procedures and assumptions is not provided

Responses to Questions

11. Is the economic impact analysis of agriculture and recreation reliable?

- Yes, the baseline results are reliable

Responses to Questions

12. Are the standards recommended for levees adequately analyzed and scientifically supported?

- The Plan's recommendation that all existing levees be upgraded to be in compliance with Public Law 84-99 as a minimum is sound
- No specific standards are recommended to upgrade levees beyond PL 84-99, although a conceptual cross-section is proposed (the "fat levee")
- The concept of a "fat levee" has merit and may prove to be a feasible and effective means to improve the stability of the levees
- Regional, state and federal agencies need to work with the public to develop standards for levees in the Delta, including whether the standards vary depending on the consequences of failure and which levees have the highest priority to be improved first

Responses to Questions

13. Are cost estimates for levee improvement reasonable and supported?
- The cost estimates are questionably optimistic (too low)
 - It is not clear that these estimates account for property and right-of-way acquisition, utility relocation, permitting, and the quality, quantity and availability of borrow material
 - If the improvements are supported by the federal government, then the costs will likely be similar to recent experience, such as New Orleans where post-Katrina improvements are more than ten times greater than what is suggested in this Plan

Responses to Questions

14. Are opportunities and strategies to protect and enhance economic sustainability effectively identified?

- Yes, a range of potential strategies is identified, including enhancing agriculture, recreation and development
- However, there is no metric for economic sustainability, making it difficult to compare the value of individual strategies

Responses to Questions

15. Are the challenges and constraints to protect and enhance economic sustainability effectively identified?
- The Plan identifies numerous potential problems that threaten the economic sustainability of the Delta
 - The Plan asserts that the prominent constraint to economic sustainability is a uniquely burdensome regulatory environment in the Delta compared to elsewhere – a more detailed description of these issues and how they might be mitigated is needed

Responses to Questions

16. Are the recommended strategies consistent with the coequal goals of improving water supply reliability and protecting, restoring and enhancing the Delta ecosystem?
- Yes, the strategies recommended address the coequal goals
 - This economic impact analysis is not appropriate for assessing, comparing, and selecting optimal strategies
 - Recommendation for creating a regional authority responsible for levee maintenance, monitoring, improvement and emergency preparedness and response has merit
 - The critical issue of how these strategies are funded is not addressed

Recommendations to Council

1. Develop strategies to implement a user-fee system to address the public-goods nature of the Delta
2. Conduct a comprehensive and credible cost-benefit analysis to analyze alternatives for improving water supply reliability and enhancing ecosystem services
3. Regional, state and federal agencies work with the public to develop standards for levees in the Delta
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5. State agencies work with local stakeholders to develop a prioritization plan for investing future resources in the Delta
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